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EXAMINER

PAK, JOHN D

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/692,797

Applicant(s)

MASON, WENDA

Examiner

JOHN PAK

Art Unit

1616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6, 11, 12 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 11, 12 and 23 is/are allowed.
- 6) ☒ Claim(s) 24-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☒ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. 3/17/04 + 9/14/04
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

Claims 1-6, 11-12 and 23-31 are pending in this application.

It is noted for the record that the faxed amendment of 9/2/2004 is a copy of the amendment that was originally filed on 4/5/2004. Applicant filed the duplicate copy because the Examiner called Mr. Derick Allen on 8/31/2004 to request such a copy since the original paper was not matched with the application file (then a paper file) at that time.

#### Claim Interpretation

Independent claim 1 recites "a saponified or non-saponified fatty acid-based active ingredient ... said fatty acid-based-active ingredient comprising a mixture of pelargonic acid, capric acid and lauric acid." Independent claim 24 is similar except that it does not require lauric acid.

The Examiner interprets "non-saponified fatty acid-based active ingredient ... said fatty acid-based active ingredient comprising a mixture of pelargonic acid, capric acid and lauric acid" to mean that the fatty acid-based active ingredient comprises a mixture of pelargonic acid per se, capric acid per se and lauric acid per se. Put another way, the "non-saponified fatty acid-based active ingredient" does not read on glycerides that happen to contain the specified acids as part of one or more glyceride (e.g. diglyceride, triglyceride) structure.

Allowed Claims & Amendment Suggestion

In the previous Office action of 12/3/2003, claims 1-6, 11 and 12 were allowed. Dependent claim 23 was rejected for a nomenclature problem. Claim 23 has been amended to overcome the nomenclature issue. Therefore, claims **1-6, 11-12 and 23** are allowed.

Applicant is advised that claim 5 could be improved by rewriting the "other metal salts" to more positively recite the intended claim scope. Further improvement could be obtained by clarifying the fatty acid-based ingredient since claim 5 (in view of claim 23) contains two types of fatty acid-based ingredients. The Examiner recommends the following redrafting of the claims ----

Claim 5. (Currently amended) The composition of claim [23]1, wherein said fatty acid-based active ingredient comprises a mixture of salts of pelargonic acid, capric acid and lauric acid selected from the group consisting of [sodium salts, potassium salts, other] metal salts and ammonium salts.

Claim 32. (New) The composition of claim 5, wherein said metal salts are selected from the group consisting of sodium salts and potassium salts.

Claim 23. (Previously presented) The composition of claim 3 wherein said fatty acid-based active ingredient additionally comprises a salt of a fatty acid selected from the group consisting of caprylic acid, undecanoic acid, oleic acid and mixtures thereof.

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Claim 34. (New) The composition of claim 23, wherein said salts of pelargonic acid, capric acid and lauric acid and said salt of a fatty acid selected from the group consisting of caprylic acid, undecanoic acid, oleic acid and mixtures thereof are metal salts, ammonium salts or mixtures thereof.

Claim 35. (New) The composition of claim 23, wherein said metal salts are selected from the group consisting of sodium salts and potassium salts.

Claim 29. (Currently amended) The composition of claim 26 wherein said fatty acid-based active ingredient comprises a mixture of salts of pelargonic acid and capric acid selected from the group consisting of [sodium salts, potassium salts, other] metal salts and ammonium salts.

Claim 36. (New) The composition of claim 29 wherein said metal salts are selected from the group consisting of sodium salts and potassium salts.

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#### Prior Art Based Ground of Rejection

At the outset, the following ground of rejection does not apply to the allowed subject matter indicated above. That is to say, claims 27-28 could encompass subject matter that overlaps with the scope of the allowed claims, supra. Such subject matter is excluded from this ground of rejection.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Franz (US 3,977,860), Franz (The Herbicide Glyphosate; Grossbard et al. (eds.)), WO 89/03178, WO 90/07275 and Decor et al. (US 5,147,444).

Franz teaches the herbicidal utility of glyphosate-based compounds and their salts (see columns 1-3). Use of said herbicidal compounds with other herbicides (column 5, lines 14-16) and conventional herbicidal additives such as emulsifier, surfactant, oil and/or alcohol (columns 14-15) is disclosed. Application rates of 0.01-20+ lbs/acre is also disclosed. Water is the preferred diluent with glyphosate salts (column 14, lines 34-38).

Franz (in The Herbicide Glyphosate (edited by Grossbard et al.)) is cited to establish that (i) glyphosate is a well known translocating herbicide (pp. 3-4), and (ii) oil adjuvants should be formulated with surfactants if they are to give a stable sprayable emulsion of glyphosate with water (pp. 225-226).

WO 89/03178 teaches that C<sub>6-18</sub> fatty acids and their salts possess herbicidal properties (pp. 3, 5-6). 1:1 mixture of pelargonic acid (nonanoate) salt + capric acid

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(decanoate) salt is specifically disclosed (p. 4, first paragraph for specific disclosure; p. 3, first paragraph for broader disclosure). When used with translocating herbicidal ammonium compounds, improved herbicidal efficacy is taught (p. 5, first paragraph). When used with said translocating herbicides, fatty acids were at concentrations that are within the claimed concentrations of the instant application (see for example page 12, Table 4). 0.5 wt% is specifically disclosed (p. 5, lines 2-5). Sodium or potassium salts of the fatty acids are disclosed (p. 6, lines 4-7). Fatty acids and their salts are disclosed to cause easily observed topical burn to plants but lack translocating efficacy, so they can fail in their ability to kill plant roots (p. 5, lines 2-8).

WO 90/07275 teaches that salts of N-(phosphonomethyl)glycine can be used with fatty acids and their salts (see p. 7, lines 27-30 and p. 12, lines 13-15).

Decor et al. teach that because glyphosate type herbicides are known to act relatively slowly, they are used in combination with other herbicides to increase the speed of action (see column 1, line 28 to column 2, line 27).

The difference between the claimed invention and the cited references is that the references do not expressly disclose the aqueous herbicidal combination of 0.08-2 wt% glyphosate/salts and 0.5-3 wt% fatty acid/salt mixture of pelargonic acid and capric acid, as claimed. However, one having ordinary skill in the art would nonetheless have been motivated to arrive at the claimed invention for the following reasons.

The ordinary skilled artisan in the herbicidal field, at the time the invention was made, would have been taught that glyphosate-based herbicides are slow acting and are known to be combined with faster acting co-herbicides to improve their herbicidal activity. Similarly, the ordinary skilled artisan would have been taught that fatty acid-based herbicides such as a mixture of pelargonic acid/salt + capric acid/salt deliver rapid topical activity and are known to be combined with a translocating herbicide to obtain improved activity.

Hence, the motivation to combine the herbicidal properties of glyphosate based herbicides with pelargonic acid/salt + capric acid/salt, with or without other fatty acids/salts and/or emulsifier component is plainly in evidence. Glyphosate lacks rapid action and fatty acid-based herbicides provide such rapid activity. Fatty acid-based herbicides lack translocating activity and glyphosate based herbicides deliver such translocating activity. The two herbicidal components thereby provide what each individual component lacks in terms of herbicidal activity, and their combination would have been expected to provide at least the benefits of combined activity and combined advantages of their individual activities.

As for concentration of the herbicidal components, the fatty acid-based ingredient is clearly taught at 0.5 wt% or more (WO 89/03178). Glyphosate is one of the best known and widely used herbicides in the world, even at the time of the filing of this application, and there is sufficient evidence that 0.08-2 wt% would have been well within



the concentration range that would have been appropriate for glyphosate-based herbicides. Franz discloses herbicidal activity at concentrations as low as 0.01 to 1000 ppm (equivalent to 0.1 wt%). See in Franz, US 3,977,860, column 16, lines 56-57. Decor et al. disclose 0.01-20 wt% active ingredients (column 9, lines 50-52). WO 90/07275 explicitly discloses that one skilled in the art can readily determine the amount of glyphosate herbicide to use to control undesirable plants (p. 16, lines 9-23). One having ordinary skill in the art would therefore have been motivated to arrive at a concentration amount of glyphosate within the range claimed herein in combination with 0.5 to less than 3 wt% fatty acid based active ingredient with the expectation that the combined ingredients would provide advantageous herbicidal results.

Therefore, in the absence of any objective evidence of nonobviousness relevant to the claimed subject matter, the claimed invention, as a whole, would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, because every element of the invention and the claimed invention as a whole have been fairly disclosed or suggested by the teachings of the cited reference.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is **(571)272-0620**. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Gary Kunz, can be reached on **(571)272-0887**.

The fax phone number for the organization where this application or proceeding is assigned is **(571)273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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